

Listing of Claims

1. (Currently Amended) A method of selecting a transmission antenna in a packet transmission system having multiple antennas, comprising:

transmitting a first data block through a first one of a plurality of sequentially selected antennas;

transmitting a second data block through a second one of the plurality of antennas;

receiving a first signal indicating that an error occurred during transmission or reception of the first data block, the first error signal received after transmission of the second data block;

interrupting sequential selection of the plurality of antennas to select the second one of the plurality of antennas in response to the first error signal;

retransmitting the first data block only through the second one of the plurality of antennas, wherein the first data block is retransmitted in consecutive sequence with the second data block transmitted by the second one of the plurality of antennas, said interruption of sequential selection of the plurality of antennas preventing the first data block from being retransmitted through the first one of the plurality of antennas;

resuming sequential selection of the plurality of antennas, after the first data block is retransmitted through the second one of the plurality of antennas, said resuming including transmitting a third data block through the first one of the plurality of antennas and thereafter a fourth data block through the second one of the plurality of antennas after acknowledgment signals are respectively received for the third and fourth data blocks; and

transmitting additional data blocks through the sequentially selected antennas,
wherein transmission and retransmission of the data block occurs through a
mobile communication system, and wherein an open loop transmit diversity technique is used to
transmit data in the mobile communication system and the open loop transmit diversity
technique is a TSTD (time switched transmit diversity) technique.

2. (Previously Presented) The method of claim 1, wherein the first error signal indicates whether a receiver correctly received the first data block transmitted through the first one of the plurality of antennas.

3. (Canceled)

4. (Previously Presented) The method of claim 1, wherein the first error signal is a non-acknowledgment signal transmitted from a receiver.

5. (Canceled)

6. (Currently Amended) A method of selecting a transmission antenna in a packet transmission system having multiple antennas, comprising:
sequentially selecting a plurality of antennas to transmit data, wherein a first antenna is selected to transmit a first data block and a second antenna is selected to a second data block, the first and second data blocks being consecutive data blocks;

receiving a first signal indicating that an error occurred during transmission or reception of the first data block, the first error signal received after transmission of the second data

block;

interrupting sequential selection of the plurality of antennas to select the second antenna in response to the first error signal;

retransmitting the first data block through the second antenna, wherein the first data block is retransmitted in consecutive sequence with the second data block transmitted by the second antenna, said interruption of sequential selection of the plurality of antennas preventing the first data block from being retransmitted through the first one of the plurality of antennas; ~~and~~

transmitting additional data blocks through the second antenna, the additional data blocks transmitted in consecutive sequence after retransmission of the first data block,

receiving a second error signal indicating that one of the additional data blocks was transmitted or received in error;

interrupting the consecutive transmission of the additional data blocks in response to the second error signal; and

transmitting one or more subsequent data blocks through a third antenna, wherein the third antenna is same as the first antenna or is different from the first antenna and the second antenna.

7-10 (Canceled)

11. (Previously Presented) The method of claim 1, wherein transmission and retransmission of the data block are downlink transmissions.

12-14 (Canceled)

15. (Previously Presented) The method of claim 1, wherein the first error signal is received based on an ARQ (automatic repeat request) from a receiver.

16. (Currently Amended) A method of selecting a transmission antenna in a packet transmission system having multiple antennas, comprising:

sequentially selecting a plurality of antennas for transmission of data, wherein a first data block is transmitted to a receiver through a first antenna and a second data block is transmitted through a second antenna;

checking a first response signal of the receiver, the first response signal received after transmission of the second data block;

if the first response signal is a retransmission request signal, retransmitting the first data block only through the second antenna, wherein the first data block is retransmitted in consecutive sequence with the second data block initially transmitted by the second antenna;

resuming sequential selection of the plurality of antennas after the first data block is retransmitted through the second antenna; and

transmitting additional data blocks through the sequentially selected antennas, wherein an open loop transmit diversity technique is used to transmit data in the mobile communication system and the open loop transmit diversity technique is a TSTD (time switched transmit diversity) technique.

17. (Previously Presented) The method of claim 16, further comprising:

sequentially selecting the multiple antennas including the first antenna and the second antenna, said sequential selection taking place before the first response signal is checked.

18. (Canceled)

19. (Currently Amended) A method comprising

sequentially selecting a plurality of antennas for transmission of data, wherein a first data block is transmitted to a receiver through a first antenna and a second data block is transmitted through a second antenna;

checking a first response signal of the receiver, the first response signal received after transmission of the second data block;

if the first response signal is a retransmission request signal, retransmitting the first data block through the second antenna, wherein the first data block is retransmitted in consecutive sequence with the second data block initially transmitted by the second antenna;

transmitting additional data blocks through the second antenna, the additional data blocks transmitted in consecutive sequence after retransmission of the first data block,

receiving a second response signal indicating that one of the additional data blocks was transmitted or received in error;

interrupting the consecutive transmission of the additional data blocks in response to the second response signal; and

transmitting one or more subsequent data blocks through a third antenna, wherein the third antenna is same as the first antenna or is different from the first antenna and the second antenna.

20-23 (Canceled)

24. (Previously Presented) The method of claim 16, wherein transmission and retransmission of the data block are downlink transmissions.

25-26 (Canceled)

27. (Previously Presented) The method of claim 16, wherein the first response signal is received based on an ARQ (automatic repeat request) from a receiver.

28. (Original) The method of claim 27, wherein the response signal is ACK or NACK signal according to ARQ.

29. (Canceled)